USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2003WI47B

Title: Arsenic Contamination in Groundwater in Southeast Wisconsin

Project Type: Research

Focus Categories: Hydrogeochemistry, Toxic Substances, Water Quality

Keywords: arsenic

Start Date: 03/01/2003

End Date: 02/29/2004

Federal Funds Requested: $28628.00

Matching Funds: $25453.00

Congressional District: 2nd

Principal Investigators: Bahr, Jean (Univ. of Wisconsin); Gotkowitz, Madeline

Abstract: Moderate to high levels of arsenic contamination occur in groundwater throughout eastern Wisconsin. Previous studies have shown that oxidative dissolution of arsenic-bearing sulfide minerals is the likely mechanism controlling high levels of arsenic contamination in the Fox River valley area. Our preliminary work indicates that geologic and hydrogeologic conditions contributing to arsenic-impacted wells in southeast Wisconsin differ from those in the Fox River valley. Thus, geochemical mechanisms of arsenic release other than sulfide oxidation, such as the reduction of arsenic-bearing iron-(hydr)oxides, may affect groundwater supplies in southeast Wisconsin. We propose to use groundwater chemistry data, lithologic, mineralogic, and well construction information to identify geologic sources of arsenic. Bench-scale leaching experiments and geochemical modeling will be used to examine the mechanisms controlling the release of arsenic to the ground water. The objectives of this proposed study are to identify the geologic source(s) of arsenic and the geochemical mechanism(s) and environmental conditions that cause release of arsenic to well water in southeast Wisconsin.

U.S. Department of the Interior, *U.S. Geological Survey*
Maintain: Schefter@usgs.gov
Last Modified: Mon June 16, 2003 10:48 AM
Privacy Statement || *Disclaimer* || *Accessibility*